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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,187	10/16/2000	Tatsuya Seshimo	Q61335	8574

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EXAMINER

HUFFMAN, JULIAN D

ART UNIT

PAPER NUMBER

2853

DATE MAILED: 02/22/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/688,187

Applicant(s)

SESHIMO ET AL.

Examiner

Julian D. Huffman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4, 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 6-8, 14 and 17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 is not clear, specifically lines 10-12 and 17-23.

Claims 7-8 depend from rejected claim 6.

In claim 14, the last line is not clear.

In claim 17, the phrase attention ink information is not clear and a clear definition of the term is not provided in the specification, the description found on page 14 of the specification is vague and insufficient. The scope of this claim is unclear, however, the examiner attempted to examine the claim and has assumed that the claim broadly refers to a compatibility check which checks that the ink is compatible with the recording apparatus.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

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by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

4. Claims 1, 2, 9-11, 15, 18-19 rejected under 35 U.S.C. 102(e) as being anticipated by Cook (U.S. 6,155,664).

Cook discloses an ink jet recording apparatus comprising an ink jet recording head (element 2) for receiving supply of ink from an ink cartridge (element 8) provided with storage means (element 14) for storing data for determining compatibility of a recording apparatus, and control means (36) for determining compatibility of ink when head is to be filled with ink after it is mounted (column 7, lines 40-44 and column 8, lines 1-6), based on the data in the storage means and executing print operation, wherein:

if compatibility to an ink cartridge cannot be confirmed when the ink cartridge is mounted, the recording apparatus generates a caution and awaits input of a continuation instruction by a user to execute a subsequent operation (fig. 3, column 8, lines 46-50).

With regards to claim 15, Cook discloses a method of determining compatibility of ink based on data stored in storage means of an ink cartridge for supplying ink to a recording head of an ink jet recording apparatus, the method comprising the steps of:

generating a caution if compatibility to an ink cartridge cannot be confirmed when the ink cartridge is mounted; and

awaiting input of a continuation instruction by a user to execute a subsequent operation (fig. 3, column 8, lines 46-50).

With regards to claims 9, 11 and 18-19, since in the invention of Cook, the user is warned of an incompatible ink cartridge, the mere fact that the user is warned that the cartridge is not compatible is enough to enable the user to determine a compatible ink cartridge. For example, if the user had a plurality of ink cartridges, they could be inserted in a trial and error process until a compatible cartridge was found.

With regards to claim 2, Cook discloses that the compatibility check may be performed when a refilling operation is initiated (column 8, lines 1-3). Cook also teaches that periodic refilling of the printhead is performed after the initial supply in the printhead's reservoir is depleted (column 1, lines 29-34). Since periodic refilling will occur after the printhead's reservoir becomes substantially depleted, and a compatibility check is performed when a refilling operation is initiated, Cook teaches the invention of claim 2.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook as applied to claim 2 above.

Cook discloses the invention of claim 3 with the exception of moving the ink cartridge to an ink cartridge replacement position if a cartridge replacement instruction is entered.

The examiner takes official notice that moving an ink cartridge to an ink cartridge replacement position if a cartridge replacement instruction is entered is well known in the art.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate this teaching into the invention of Cook to obtain the invention claimed for the purpose of facilitating user replacement of an ink cartridge by moving it to a location which is accessible to the user.

7. Claims 4-6 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook in view of Keeling et al. (U.S. 5,455,606) and Bullock (U.S. 5,699,091).

Cook discloses an ink jet recording apparatus comprising an ink jet recording head (2) for receiving supply of ink from an ink cartridge (8) provided with storage means (12) storing data, and control means (36) for driving the recording head based on the data in the storage means, the recording apparatus further comprising:

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print control means (36) which reads data from the storage means of the ink cartridge to determine compatibility when the ink cartridge is mounted;

wherein the storage means stores an optimum drive condition for an ink cartridge and ink information for the ink cartridge (column 7, lines 5-16).

With regards to claims 16-17, Cook discloses a method of determining compatibility of ink based on data stored in storage means of an ink cartridge for supplying ink to a recording head of an ink jet recording apparatus, the method comprising the steps of:

reading data from the storage means of the ink cartridge to determine compatibility of the ink cartridge;

generating a caution if compatibility to an ink cartridge cannot be confirmed when the cartridge is mounted; and

awaiting input of a continuation instruction by a user to execute a subsequent operation (fig. 3, column 8, lines 46-50).

Cook does not disclose selecting default settings if the compatibility cannot be determined.

Keeling et al. teaches that if information is not available regarding a recording unit, default values are used which approximate the expected values (column 11, lines 60-66).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Keeling et al. into the invention of

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Cook to obtain the invention claimed for the purpose of enabling printing to continue when recording unit information cannot be obtained through the use of default values which provide a best approximation.

Cook in view of Keeling et al. do not expressly disclose controlling the printer in accordance with data stored in the cartridge storage means,

Additionally, Cook in view of Keeling et al. disclose the invention of claim 5 with the exception of update data storage means in the controller, the update data storage means being updated with data stored in the ink cartridge storage means.

However, Bullock et al. discloses an update data storage means such that a controller may update its control parameters and control print operations in accordance with data stored in a cartridge storage means (column 6, lines 25-27 and 50-55).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Bullock et al. into the invention of Cook in view of Keeling et al. to obtain the invention claimed for the purpose of controlling printing parameters in accordance with cartridge type to prevent variations in print quality (column 6, lines 44-50).

8. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cook as applied to claim 11 above, and further in view of Hashimoto (U.S. 5,764,251) and Cowger (U.S. 6,102,508).

Cook does not disclose a means for determining a recording medium type.

Hashimoto discloses this (abstract).

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Hashimoto into the invention of Cook to obtain the invention claimed for the purpose of optimizing print settings based on recording media type.

Cook in view of Hashimoto do not disclose ensuring compatibility between a recording apparatus and a recording medium.

However, Cowger discloses that it is critical that a recording media be compatible with the type of recording unit used in the printing apparatus (column 1, lines 22-30).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the teachings of Cowger into the invention of Cook and Hashimoto to obtain the invention claimed for the purpose of ensuring high image quality.

9. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cook as applied to claim 11 above, and further in view of Cowger (U.S. 6,102,508).

Cook does not expressly disclose outputting data for specifying the mounted ink cartridge if it is to be replaced.

However, Cowger discloses this (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the invention of Cowger into the invention of Cook to obtain the invention claimed for the purpose of aiding in the selection of a replaceable ink cartridge (column 3, lines 34-35) and ensuring that the proper cartridge is purchased

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by the user to minimize the number of trips to the store and to ensure compatibility (column 6, lines 56-60).

Allowable Subject Matter

10. Claims 7-8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

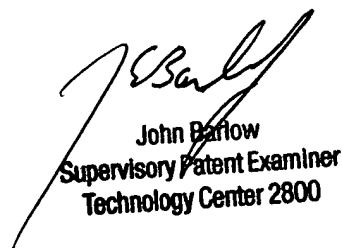
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (703) 308-6556. The examiner can normally be reached on Monday through Friday from 9:30 a.m. to 6:00 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow, can be reached on (703) 308-3126. The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7722. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



JH

February 15, 2002



John Barlow
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